AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111
Serial Number: 10/716,758
Filing Date: November 19, 2003
Title: SPECTRUM MANAGEMENT APPARATUS, METHOD, AND SYSTEM

Page 2 Dkt: 80107.094US1

# **IN THE DRAWINGS**

Ten sheets of formalized replacement drawings are enclosed herewith.

#### **REMARKS**

Applicant has reviewed and considered the Office Action mailed on <u>February 21, 2007</u>, and the references cited therewith. Claims <u>1, 5, 9, 11, 19, and 26</u> are amended, claims <u>4, 6-8, and 30</u> are canceled, and no claims are added; as a result, claims <u>1-3, 5, and 9-29</u> are now pending in this application.

All claims in the instant application stand rejected in view of Anderson et al. (U.S. Patent No.6,522,699). Anderson describes a system that encodes in-phase and quadrature baseband data to create spectral notches at either side of zero frequency at baseband, and the baseband data is then modulated and upconverted in frequency so that the spectral notches are moved to frequency(ies) of interest. [column 7, lines 24-44]. Anderson also mentions notch filters operating at baseband or passband, [column 2, lines 13-18], but these are in the context of heterodyne systems in which frequency conversion takes place prior to transmission. Accordingly, Anderson does not describe the placement of a spectral notch directly in the spectra of baseband digital data to be transmitted. Further, Anderson does not contemplate modifying the frequency of the spectral notch by modifying a clock frequency of the notch filter.

In contrast to Anderson, the claimed invention creates a spectral notch at a non-zero frequency directly in the transmitted baseband digital data. The frequency of the spectral notch may be modified by modifying an operating frequency of the partial response encoder that encodes the baseband digital data. No frequency conversion is necessary in the claimed invention to place the spectral notch.

The independent claims have been amended to clearly distinguish the claimed invention from the Anderson reference. Individual claims are discussed below.

### 35 USC § 112 Rejection of the Claims

Claims 9-18 were rejected under 35 USC § 112, first paragraph, as failing to comply with the enablement requirement. Independent claim 9 has been amended to include additional subject matter. Applicants respectfully submit that claim 9 as amended is not a single means claim. Accordingly, applicants believe this rejection has been overcome.

## 35 USC §102 Rejection of the Claims

Claims 9, 19 were rejected under 35 USC  $\S$  102(e) as being anticipated by Anderson et al. (U.S. Patent No.6,522,699). Claims 9 and 19 have been amended to recite additional subject matter. Applicants respectfully submit that the Anderson reference does not disclose, teach, or suggest the subject matter of claim 9 as amended, including for example, "a digital data port to transmit baseband digital data, the digital data port having a reconfigurable partial response encoder to encode the baseband digital data such that when transmitted, the baseband digital data exhibits a spectral notch in the region of a wireless frequency band" and "a circuit to modify a clock frequency of the reconfigurable partial response encoder to move the spectral notch in frequency." Further, applicants respectfully submit that the Anderson reference does not disclose, teach, or suggest the subject matter of claim 19 as amended, including for example, "a partial response encoder to create a spectral notch at a non-zero frequency in transmitted baseband digital data" and "an adaptive circuit to ... modify a clock frequency of the partial response encoder to tune the spectral notch." Accordingly, applicants believe this rejection has been overcome.

### 35 USC \$103 Rejection of the Claims

Claims <u>1-4, 10-18, 20-30</u> were rejected under 35 USC § 103(a) as being unpatentable over <u>Anderson et al. (U.S. Patent No.6,522,699)</u>. Claims <u>5-8</u> were rejected under 35 USC § 103(a) as being unpatentable over <u>Anderson et al. (U.S. Patent No.6,522,699)</u> in view of Schramm et al. (U.S. Patent No. 6,208,663).

The rejection of claims 10-18 and 20-25 relies on the premise that the Anderson reference anticipates the subject matter of claims 9 and 19. Applicants respectfully submit that the Anderson reference does not anticipate independent claims 9 and 19 as amended. Accordingly, applicants believe that the amendment of claims 9 and 19 has overcome the rejection of claims 10-18 and 20-25.

Independent claims 1, 5, and 26 have been amended to include limitations similar to those described above. For example, claims 1 and 5 include modifying a clock frequency of the partial response encoder to tune a spectral notch in transmitted baseband data. Also for example, claim 26 has been amended to include limitations similar to claim 9. As discussed above,

applicants submit that Anderson does not disclose, teach, or suggest these limitations.

Applicants further submit that Anderson and Schramm taken in combination do not disclose, teach, or suggest these limitations.

Accordingly, applicants believe that independent claims 1, 5, and 26 are in condition for allowance. Applicants further submit that claims 2, 3, and 27-29 are in condition for allowance at least by virtue of dependency.

## Reservation of Rights

Applicants do not admit that references cited under 35 USC §§ 102(a), 102(e), 103/102(a), or 103/102(e) are prior art, and reserve the right to swear behind them at a later date. Arguments presented to distinguish such references should not be construed as admissions that the references are prior art.

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## Conclusion

Page 10

Dkt: 80107.094US1

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (952-473-8800) to facilitate prosecution of this application.

Respectfully submitted,

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By their Representatives,

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